

### **ABSTRACT OF THE DISCLOSURE**

A method for fabricating patterned ceramic layers on areas of a relief structure, wherein the layers may be arranged essentially perpendicular to a top side of a substrate. In exemplary embodiments, a patterned ceramic layer forms an oxide collar for a trench capacitor. The oxide collar is produced by a trench firstly being filled with a resist in its lower section, and an oxide layer subsequently being produced on the uncovered areas of the substrate with the aid of a low temperature ALD method. By means of anisotropic etching, only those portions of the ceramic layer which are arranged at the perpendicular walls of the trench remain. The resist filling may subsequently be removed, for example, by means of an oxygen plasma.